REMARKS

The above reference application, for which this is a Preliminary Amendment, is a division of Serial No. 09/661,328. Original claims 1-24, 32-40, and 53-64 of the present application have been cancelled in order to pursue claims 25-31, 41-52, and 65-72, which composed Group II in the Restriction Requirement of the parent application.

Consideration of pending claims 25-31, 41-52, and 65-72is therefore respectfully requested and an early indication of their allowability is earnestly solicited.

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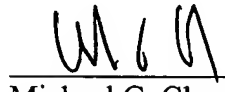
Respectfully submitted,



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Appendix

Pending Claims:

(Claims 1-24 have been cancelled.)

25. A method of simulating the operation of a circuit, comprising:

providing a simulation model of the circuit;

selecting a set of frequency points;

simulating the response of the circuit for a subset of the frequency points using the simulation model, said subset comprising a first group and a distinct second group, wherein each frequency point of said first group lies between a pair of frequency points in said second group of frequency points;

interpolating the response of the circuit for the first group of frequency points from the simulated values of the second group of frequency points;

comparing the simulated response with the interpolated response for the first group of frequency points, wherein if the difference between the simulated value and the interpolated value of a first point in the first group exceeds a bound, an additional frequency point is added to the second group, the additional point lying between the same pair of frequency points in said second group as the first point;

iteratively repeating the interpolating and comparing until the difference between the simulated value and the interpolated value of each point in the first group do not exceeds the bound; and

determining the response of the circuit for frequency points not in the subset from the interpolated response.

26. The method of claim 25, wherein said response is interpolated and simulated in the Y response parameter representation.

27. The method of claim 25, wherein the interpolating is a cubic spline interpolation.

28. The method of claim 25, wherein the circuit is a sub-circuit representation of a non-linear device.

29. The method of claim 28, wherein the non-linear device is a MOSFET.

30. The method of claim 29, wherein the set of frequency points includes frequencies greater than 10^9 hertz.

31. The method of claim 30, wherein the number of elements in the set of frequency points is larger than the number of elements in the subset of frequency points by more than a factor of ten.

(Claims 32-40 have been cancelled.)

40. The method of claim 33, additionally comprising:

supplying data values of the response characteristics of the non-linear device for the target set; and

providing a graphic representation of the data values concurrently with the model determined values of the target set upon the values of said input parameters chosen from said parameter range.

41. A method of simulating the dependence of non-linear device performance upon factor variations, comprising:

providing a typical model of a sub-circuit representation of a non-linear device, the typical model dependent upon a plurality of model specific parameters;

supplying statistical distributions of a first set of simulation targets;

calibrating a statistical distribution of a selected set of model specific parameters with the first set of simulation targets using the typical model; and

generating a statistical distribution of a selected second set of simulation targets from the calibrated statistical distributions using the typical model.

42. The method of claim 41, wherein said calibrating and generating are performed using a Monte Carlo technique.

43. The method of claim 41, wherein said statistical distributions of a first set of simulation targets are the mean and standard deviation of electrical test data.

44. The method of claim 41, wherein said second set of simulation targets are response parameters of the device.

45. The method of claim 44, wherein said second set of simulation targets includes the cut off frequency of the device.

46. The method of claim 44, wherein said second set of simulation targets includes the speed of the device.

47. The method of claim 44, wherein said second set of simulation targets includes the power consumption of the device.

48. The method of claim 44, further comprising specifying said response parameters, operating conditions of the device, and a range over which they are simulated.

49. The method of claim 44, further comprising specifying a simulation number.

50. The method of claim 44, wherein specifying said a range over which the response parameters and operating conditions are simulated includes specifying frequencies over 10^9 hertz.

51. The method of claim 41, wherein said non-linear device is a MOSFET.

52. The method of claim 41, further comprising generating a corner model subsequent to the generating of a statistical distribution.

(Claims 53-64 have been cancelled.)

65. A computer readable storage device embodying a program of instructions executable by a computer to perform a method of simulating the operation of a circuit, said method comprising:

providing a simulation model of the circuit;

selecting a set of frequency points;

simulating the response of the circuit for a subset of the frequency points using the simulation model, said subset comprising a first group and a distinct second group, wherein each frequency point of said first group lies between a pair of frequency points in said second group of frequency points;

interpolating the response of the circuit for the first group of frequency points from the simulated values of the second group of frequency points;

comparing the simulated response with the interpolated response for the first group of frequency points, wherein if the difference between the simulated value and the interpolated value of a first point in the first group exceeds a bound, an additional frequency point is added to the second group, the additional point lying between the same pair of frequency points in said second group as the first point;

iteratively repeating the interpolating and comparing until the difference between the simulated value and the interpolated value of each point in the first group do not exceeds the bound; and

determining the response of the circuit for frequency points not in the subset from the interpolated response.

66. The computer readable storage device of claim 65, wherein the circuit is a sub-circuit representation of a MOSFET.

67. A method for transmitting a program of instructions executable by a computer to perform a process of simulating the operation of a circuit, said method comprising:

transmitting to a user a program of instructions; and

enabling the user device to perform, by means of such program, the following process:

providing a simulation model of the circuit;

selecting a set of frequency points;

simulating the response of the circuit for a subset of the frequency points using the simulation model, said subset comprising a first group and a distinct second group, wherein each frequency point of said first group lies between a pair of frequency points in said second group of frequency points;

interpolating the response of the circuit for the first group of frequency points from the simulated values of the second group of frequency points;

comparing the simulated response with the interpolated response for the first group of frequency points, wherein if the difference between the simulated value and the interpolated value of a first point in the first group exceeds a bound, an additional frequency point is added to the second group, the additional point lying between the same pair of frequency points in said second group as the first point;

iteratively repeating the interpolating and comparing until the difference between the simulated value and the interpolated value of each point in the first group do not exceeds the bound; and

determining the response of the circuit for frequency points not in the subset from the interpolated response.

68. The method of claim 67, wherein the circuit is a sub-circuit representation of a MOSFET.

69. A computer readable storage device embodying a program of instructions executable by a computer to perform a method of simulating the dependence of non-linear device performance upon factor variations, said method comprising:

receiving a typical model of a sub-circuit representation of a non-linear device, the typical model dependent upon a plurality of model specific parameters;

receiving statistical distributions of a first set of simulation targets;

calibrating a statistical distribution of a selected set of model specific parameters with the first set of simulation targets using the typical model; and

generating a statistical distribution of a selected second set of simulation targets from the calibrated statistical distributions using the typical model.

70. The computer readable storage device of claim 69 further comprising generating a corner model subsequent to the generating of a statistical distribution

71. A method for transmitting a program of instructions executable by a computer to perform a process of simulating the dependence of non-linear device performance upon factor variations, said method comprising:

providing a typical model of a sub-circuit representation of a non-linear device, the typical model dependent upon a plurality of model specific parameters;

supplying statistical distributions of a first set of simulation targets;

calibrating a statistical distribution of a selected set of model specific parameters with the first set of simulation targets using the typical model; and

generating a statistical distribution of a selected second set of simulation targets from the calibrated statistical distributions using the typical model.

72. The method of claim 71, wherein the process further comprising generating a corner model subsequent to the generating of a statistical distribution.